CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-45
NPDES NO. CA0037681

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

RICHMOND-SUNSET WATER POLLUTION CONTROL PLANT
CITY AND COUNTY OF SAN FRANCISCO

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. The City and County of San Francisco, hereinafter called the discharger, submitted a report of waste discharge dated March 15, 1984 for reissuance of NPDES Permit No. CA 0037681.

2. The discharger presently discharges an average dry weather flow of 21 million gallons per day (mgd) from its primary treatment plant which has a design capacity of 47 mgd. This plant treats domestic and industrial wastewater from the Richmond Sunset Sewerage Zone of San Francisco. The treated wastewater is discharged into the Pacific Ocean, a water of the State and United States, north of Land's End at the shore line, through the Mile Rock Outfall. [Latitude 37 deg., 47 min., 08 sec.; Longitude 122 deg., 30 min., 33 sec.]

3. During wet weather, the plant treats a combination of domestic and industrial wastewater mixed with storm water runoff, all containing pollutants, up to a maximum of 47 mgd. All other flow collected in the service area is stored in the collection system or the Westside storage/transport system for later treatment, or it overflows to the Pacific Ocean. These combined sewer overflows are governed by a separate NPDES Permit (No. CA0038415).

4. Upon completion of the Southwest Ocean Outfall Project and the Westside Activation Project, the treated wastewater will be discharged into the Pacific Ocean through an outfall located about 20,500 feet offshore from Lake Merced at a depth of about 75 feet below mean lower low water. [Latitude 37 deg., 42 min., 08 sec.; Longitude 122 deg., 34 min., 08 sec.] At this location the discharge will receive a minimum initial dilution of 100:1 for the average dry weather flow. During periods of outfall maintenance, effluent will be discharged through the Mile Rock Outfall.

5. The discharge location described in Finding 4 is outside State waters, but the discharge will affect waters within the State's jurisdiction.

6. On May 15, 1980 the State Board adopted Resolution No. 80-38 approving an exemption from the 75 percent suspended solids removal requirement of the Ocean Plan for the wet weather discharge through the Southwest Ocean Outfall.

7. The discharger has requested a waiver from secondary treatment requirements for discharge into marine waters. This request is being reviewed by the Environmental Protection Agency (EPA), which has statutory authority in this matter. If such a waiver is granted by EPA, the Board will make appropriate modifications of this Order.

8. The discharge is presently governed by Waste Discharge Requirements, Order No. 79-129, which allow discharge into the Pacific Ocean at Land's End.

9. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for the Pacific Ocean and contiguous waters.

10. The beneficial uses of the Pacific Ocean and contiguous water bodies in the vicinity of the discharge are:

- Water contact recreation
- Non-contact water recreation
- Wildlife habitat
- Preservation of rare and endangered species
- Marine habitat
- Fish migration and spawning
- Industrial service supply
- Navigation
- Commercial and sport fishing

11. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

12. NPDES Permit No. CA0038415, governing discharges from the wet weather diversion structures in this service area, allows combined sewer overflows only under the following conditions:

    a. All storage capacity within a storage facility is fully utilized; and

b. Maximum installed pumping capacity or some lower rate based on limits of downstream transport or treatment capabilities is being utilized to withdraw flows from the storage facility; and

c. All citywide treatment facilities, excluding the Golden Gate Park reclamation facility, are being operated at capacity or at some lower rate consistent with the maximum withdrawal and transport rates; and

d. Overflow occurs from a facility employing baffles or other equivalent means to reduce the discharge of floatables.

13. This Order serves as a NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

14. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contined in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the folowing:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection systems and pump stations tributary to the treatment plant is prohibited. During wet weather, such overflows or bypasses will be allowed, consistent with the prohibitions and provisions of NPDES Permit No. CA0038415 to minimize adverse water quality impact, as identified in Finding 12, above.

2. The average dry weather flow shall not exceed 24 mgd. Average shall be determined over three consecutive months each year.

B. Effluent Limitations

1. Effluent discharged shall not exceed the folowing limits:

Constituents	Units	30-day Average	7-day Average	Max. Daily	Inst. Max.
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD or	mg/l	30	45	-	-
Carbonaceous BOD(1)	mg/l	25	40	-	-
c. Total Suspended Solids	mg/l	30	45	-	-
d. Oil & Grease	mg/l	25	40	75	-
e. Total Chlorine Residual (2)	mg/l	-	-	-	0.0
f. Turbidity	JTU	75	100	225	-
g. Toxicity Conc.	tu	1.5	2.0	2.5	-

(1) Effective upon its promulgation in a new secondary treatment definition by EPA.
(2) Requirement defined as below the limit of detection in standard test methods.

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20 deg. C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (85 percent removal).

3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

4. Representative samples of the effluent shall not exceed the following limits when discharged through the Southwest Ocean Outfall:

	Unit of Measurement	6-Month Median	Daily Maximum	Inst. Maximum
Arsenic	mg/l	0.51	2.9	7.8
Cadmium	mg/l	0.30	1.2	3.0
Chromium, Hexavalent(1)	mg/l	0.20	0.81	2.0
Copper	mg/l	0.31	1.8	4.9
Lead	mg/l	0.81	3.2	8.1
Mercury	mg/l	0.0081	0.051	0.14
Nickel	mg/l	2.0	8.1	20
Silver	mg/l	0.029	0.17	0.44
Zinc	mg/l	1.2	7.3	19
Cyanide	mg/l	0.51	2.0	5.1
Ammonia (as N)	mg/l	60	240	600

(1) Dischargers may at their option meet this limitation as a total chromium limitation.

	Unit of Measurement	6-Month Median	Daily Maximum	Inst. Maximum
Phenolic Compounds (non-chlorinated)	mg/l	3.0	12	30
Chlorinated Phenolics	mg/l	0.10	0.40	1.0
Aldrin & Dieldrin	ug/l	0.20	0.40	0.61
Chlordane & Related Compounds	ug/l	0.30	0.61	0.91
DDT & Derivatives	ug/l	0.10	0.20	0.30
Endrin	ug/l	0.20	0.40	0.61
HCH	ug/l	0.40	0.81	1.2
PCBs	ug/l	0.30	0.61	0.91
Toxaphene	ug/l	0.71	1.4	2.1
Radioactivity	Not to exceed limits specified in Title 17, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Administrative Code.			

5. Representative samples of the effluent shall not exceed the following limits prior to commencement of discharge through the Southwest Ocean Outfall:(1)

	Unit of Measurement	6-Month Median	Daily Maximum	Inst. Maximum
Arsenic	mg/l	0.01	0.05	0.10
Cadmium	mg/l	0.02	0.10	0.20
Total Chromium	mg/l	0.01	0.025	0.10
Copper	mg/l	0.20	0.40	0.50
Lead	mg/l	0.10	0.40	0.50
Mercury	mg/l	0.001	0.005	0.01
Nickel	mg/l	0.10	0.50	0.80
Silver	mg/l	0.02	0.04	0.05
Zinc	mg/l	0.30	0.80	1.0
Cyanide	mg/l	0.10	0.40	1.0
Ammonia (as N)	mg/l	40	160	400
Phenolic Compounds	mg/l	0.50	2.0	5.0
Total Identifiable Chlorinated Hydrocarbons including PCB's(2)	mg/l	0.002	0.004	0.006
Radioactivity	Not to exceed limits specified in Section 30269 of the California Administrative Code.			

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards. If upon completion of secondary treatment facilities, the discharger is unable to comply with these limitations and can show good cause for such failure, the Board will consider modification of these limits.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, Chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

6. For effluent discharged through the Mile Rock Outfall, the moving median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 10,000 MPN/100 ml when verified by a repeat sample collected within 48 hours.

7. Prior to achieving compliance with effluent limitations B.1 (except e) and B.2 of this Order, the following interim limits shall apply to the discharge:

   a. Any 24-hour composite sample made up of portions collected in proportion to rate of flow at time of collection:

      Settleable Matter 0.5 ml/l-hr, maximum

   b. Any grab sample:

      Settleable Matter 1.0 ml/l-hr, maximum

C. Receiving Water Limitations(1)

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for body contact sports, the following bacteriological objectives shall be maintained throughout the water column:

   a. Samples of water from each sampling station shall have a concentration of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

   b. The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a log mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

2. Floating particulates and grease and oil shall not be visible.

3. The discharge of waste shall not cause esthetically undesirable discoloration of the ocean surface.

(1) Specific terms as defined in the Ocean Plan.

4. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

5. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

6. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

7. The pH shall not be changed at any time more than 0.2 pH units from that which occurs naturally.

8. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

9. The concentration of substances set forth in Chapter IV, Table B, of the "Water Quality Control Plan for Ocean Waters of California" in marine sediments shall not be increased to levels which would degrade indigenous biota.

10. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life.

11. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

12. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

14. Discharge of radioactive waste shall not degrade marine life.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 79-129. Order No. 79-129 is hereby rescinded.

2. When concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

   Mass Emission Limit in kg/d = Concentration Limit in mg/l x 3.79 x Actual Flow in mgd averaged over the time interval to which the limit applies.

3. The discharger shall comply with all sections of this Order immediately upon adoption.

4. The discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Board by April 15 of each year. A time schedule for completion of the initial revision shall be submitted by September 15, 1984. Documentation of operator input and review shall accompany each annual update.

5. The discharger shall review and update by October 1, 1984 and annually thereafter its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger is required to effectively implement a pretreatment program under the authority of Section 307(b) and 402(b)(8) of the Clean Water Act. As part of this responsibility, the discharger shall ensure compliance with pretreatment standards promulgated under Section 307(b) and (c) of the Clean Water Act:

   (a) Compliance by existing industrial sources with pretreatment standards shall be within 3 years of the date of promulgation of the standard unless a shorter compliance time is specified.

   (b) Compliance by new sources of industry with promulgated pretreatment standards shall be required upon commencement of discharge.

7. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

8. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except A.12 and B.3. Item C.2 of the Standard Provisions shall read as follows: The "30-day, or 7-day, average" discharge is the total discharge by weight during 30, or 7, consecutive calendar day periods, respectively, divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the 30-day, or 7-day, average discharge shall be determined by the summation of all the measured discharges by weight divided by the number of days during the 30, or 7, consecutive cal-

endar day period when the measurements were made. For other than 7-day or 30-day periods, compliance shall be based on the average of all measurements made during the specified period.

9. This Order expires July 18, 1989. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

10. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on July 18, 1984.

ROGER B. JAMES
Executive Officer

Attachments:
Standard Provisions, Reporting Requirements & Definitions, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

CITY AND COUNTY OF SAN FRANCISCO

RICHMOND-SUNSET WPCP

NPDES NO. CA0037681

ORDER NO. 84-45

CONSISTS OF

PART A dated 1/78

AND

PART B

PART B

DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

E-001	At any point in the disinfection facilities at which point adequate contact with the disinfectant is assured.
E-002	At a point in the discharge from the Richmond-Sunset WPCP at which point treatment is complete.
E-001 D	At a point in the discharge through the Southwest Ocean Outfall past which all waste tributary to the discharge flows.
E-002 D	At any point in the discharge to the Mile Rock Tunnel past which all waste tributary to the discharge flows.

C. RECEIVING WATER STATIONS (6)

Station	Description
C-2	In the surf at the mouth of Lobos Creek
C-3	In the surf at the southwestern end of Baker's Beach
C-5	In the surf at a point opposite the bathhouse on Phelan Beach.
C-9	At a point in the surf at Ocean Beach at the foot of Cabrillo Street.
C-11	At a point in the surf at Ocean Beach opposite the Lincoln Way Outfall.
C-14	At a point in the surf at Ocean Beach opposite the Vicente Street Outfall.
$C\text{-}17_{(6)}$	At a point in the surf at Ocean Beach opposite the Lake Merced Storm Tunnel.
C-19	At a point in surf at Ocean Beach at the foot of Sloat Boulevard.

D. LAND OBSERVATIONS

Station	Description
P-1 Through P-n	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
OV-001	At a point in the discharge from the Mile Rock Tunnel past which all waste tributary to the discharge flows.
OV-002	At a point in the discharge from the discharge structure on Baker's Beach past which all waste tributary to the discharge flows.
OV-005	At a point in the discharge from the 18-inch diameter pipe which discharges onto Phelan Beach near the bath house past which all waste tributary to the discharge flows.
OV-006	At a point in the discharge which discharges onto Ocean Beach at the foot of Lincoln Way past which all waste tributary to the discharge flows.
OV-007	At a point in the discharge which discharges onto Ocean Beach at the foot of Vicente Street past which all waste tributary to the discharge flows.
OV-008	At a point in the discharge from the Lake Merced Storm Tunnel onto Ocean Beach adjacent to the Vista Grande Tunnel past which all waste tributary to the discharge flows.
OV-009 Through OV-'n'	Bypass or overflows from manholes, pump stations, or collection stations.

REPORTING Shall be submitted monthly and include date, time, and period of each overflow or bypass.

F. OCEAN MONITORING STATIONS

Stations	
X-1	At the end of the ocean outfall.
X-2 X-3	Stations which delimit the zone of initial dilution to the north and south of the ocean outfall.
X-4	A control located four miles to the south of the ocean outfall in similar substrate.

REPORTING

A. Tabulations of the data to include for each constituent total number of analyses, maximum, minimum, and average values for each period. The data shall be reported on EPA form 3320-1.

B. The Annual Receiving Water Data Summary (S-39)(1) and the Annual Waste Characteristic and Loading Summary (S-37)(1) shall be filed for each constituent monthly (2).

C. A Requirement Compliance Summary, showing violation ratios, listing all constituents shall be filed monthly.

(1) The format of data presentation is subject to modification upon agreement between the discharger and the Executive Officer of the Regional Board.

(2) The frequency of filing Annual Summaries is subject to modification upon agreement between the discharger and the Executive Officer of the Regional Board.

SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given in Table I.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-45.

2. Is effective on the date shown below.

3. Does not include paragraph C.5.d of Part A.

4. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

_____
Effective Date

Attachments: Tables
Map

TABLE 1
SCHEDULE FOR SAMPLING

Sampling Station	A-001			E-001D	E-002			E-002D			E-001	OV	C
TYPE OF SAMPLE	C-24	G	Cont	C-24 (11)	C-24	G	Cont	C-24	G	Cont	G		
Flow Rate (mgd)			D	E			D			D			
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	5/W			E	5/W			5/W					
Chlorine Residual & Dosage (mg/l & kg/day) (2)						2H			2/D				
Settleable Matter (ml/l-hr. & cu. ft./day) (2)		D				4H			4H				
Total Suspended Matter (mg/l & kg/day) (1)	5/W			E	5/W			5/W					
Oil & Grease (mg/l & kg/day (5)		W				W			W				
Coliform (Total or Fecal) (MPN/100 ml) per req't (3)											(2) 5/M		3/W
Fish Toxicity, 96-hr. TL_{50} (4) % Survival in undiluted waste					2/M			2/M					
Ammonia Nitrogen (mg/l & kg/day)					2/M			2/M					2/M
Turbidity (NTU)					W			W					
pH (units)		D				D			D				
Temperature (°C)													2/M
Arsenic (mg/l & kg/day)				E	M			M					
Cadmium (mg/l & kg/day)				E	M			M					
Chromium, Total or Hexavalent (mg/l & kg/day)				E	M			M					
Copper (mg/l & kg/day)				E	M			M					
Cyanide (mg/l & kg/day)				E	M			M					
Silver (mg/l & kg/day)				E	M			M					
Lead (mg/l & kg/day)				E	M			M					
Mercury (mg/l & kg/day)				E	M			M					

TABLE 1 (continued)
SCHEDULE FOR SAMPLING

Sampling Station	A-001			E-001D	E-002			E-002D			P	OV	C
TYPE OF SAMPLE	C-24	G	Cont	C-24 (11)	C-24	G	Cont	C-24	G	Cont			
Nickel (mg/l & kg/day				E	M			M					
Zinc (mg/l & kg/day				E	M			M					
Phenolic Compounds (non-chlor- (mg/l & kg/day) inated)				E	M			M					
Chlorinated Phenolics (mg/l & kg/day)				E	M			M					
Aldrin & Dieldrin (ug/l & kg/day)				E	M			M					
Chlordane & Rel. Cmpds. (ug/l & kg/day)				E	M			M					
DDT & Derivatives (ug/l & kg/day)				E	M			M					
Endrin (ug/l & kg/day)				E	M			M					
HCH (ug/l & kg/day)				E	M			M					
PCBs (ug/l & kg/day)				E	M			M					
Toxaphene (ug/l & kg/day)				E	M			M					
All Applicable Standard Observations				E		D			D		2/W	E	3/W

LEGEND FOR TABLE

TYPES OF SAMPLES

C-24 = composite sample - 24 hour
G = grab sample
Cont = continuous sampling (metered)

STATION DESIGNATION

A = treatment facility influent stations
E = waste effluent stations
P = treatment facilities perimeter stations
OV = overflow stations
C = receiving water stations

FREQUENCY OF SAMPLING

E = each occurence
D = once each day
W = once each week
M = once each month
3/W = 3 days per week
5/W = 5 days per week
2/M = 2 days per month
2/D = twice each day
4H = every 4 hours
2H = every 2 hours

TABLE 2

SCHEDULE FOR SAMPLING: OCEAN STATIONS (8)

Sampling Station	WATER COLUMN			SEDIMENT									
TYPE OF SAMPLE		G			G								
Depth (ft,m)		M											
Temperature (°C)		M											
Salinity (ppt)		M											
Dissolved Oxygen (mg/l, % saturation)		M											
Conductivity (mmho/cm)		M											
pH (units)		M											
Secchi disk (in)		M											
Light Transmittance (%)		M											
Chlorophyll a (mg/l)		M											
Phaeophytin (mg/l)		M											
Total Coliform (MPN/100ml)		M											
Total Suspended Solids (mg/l)		M											
Settleable Solids (ml/l-hr)		M											
Turbidity (JTU)		M											
Ammonia Nitrogen (mg/l)		M											
Nitrate Nitrogen (mg/l)		M											
Nitrite Nitrogen (mg/l)		M											
Ortho-Phosphate (mg/l)		M											
Silicate (mg/l)		M											
Sediment Grain Size (Phi units)					2/Y								
Total Volatile Solids (mg/g)					2/Y								
Total Organic Carbon (mg/g)					2/Y								
Sulfides(if DO <5.0 mg/l) (mg/l)					2/Y								
Total Kjeldahl Nitrogen (mg/l)					2/Y								
Oil and Grease (mg/l)					2/Y								

TABLE 2 (continued)
SCHEDULE FOR SAMPLING: OCEAN MONITORING (8)

Sampling Station	WATER COLUMN			SEDIMENT (7)									
TYPE OF SAMPLE		G			G								
Silver (ug/g)					Y								
Arsenic (ug/g)					Y								
Cadmium (ug/g)					Y								
Chromium (ug/g)					Y								
Copper (ug/g)					Y								
Iron (ug/g)					Y								
Manganese (ug/g)					Y								
Nickel (ug/g)					Y								
Zinc (ug/g)					Y								
Mercury (ug/g)					Y								
Phenolic compounds (non-chlorinated) (ng/g)					Y								
Chlorinated Phenolics (mg/l & kg/day) (9)					Y								
Aldrin & Dieldrin (ug/l & kg/day) (9)					Y								
Chlordane & Rel. Cmpds. (ug/l & kg/day) (9)					Y								
DDT & Derivatives (ug/l & kg/day) (9)					Y								
Endrin (ug/l & kg/day) (9)					Y								
HCH (ug/l & kg/day) (9)					Y								
PCBs (ug/l & kg/day) (9)					Y								
Toxaphene (ug/l & kg/day) (9)					Y								
Benthic Infauna (10)					2/Y								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample

STATION DESIGNATION

Water Column = water quality profile at 1 meter below surface, mid-depth and 3 meters above the bottom.

FREQUENCY OF SAMPLING

M = once per month
Y = once per year
2/Y = 2 times per year

FOOTNOTES FOR TABLES AND TEXT

1. Report 30 day average in mg/l and kg/day; 7 day average in mg/l; and % removal, monthly.

2. Take the daily sample at peak flow.

3. Report the total coliform geometric 30 day mean and the geometric 5 day mean and the running median of 5 consecutive samples for total coliform, monthly.

4. Report the monthly average and the toxicity concentration per sample and the number of samples per month which exceed the maximum toxicity concentration.

5. Oil and Grease sampling shall consist of 3 grab samples taken at 8 hour intervals during the sampling day, with each grab being collected in a glass container and analysed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates at the time each grab sample was collected.

6. Original station designations retained for historical continuity; Station C-17 will be sampled once per week due to limited accessibility.

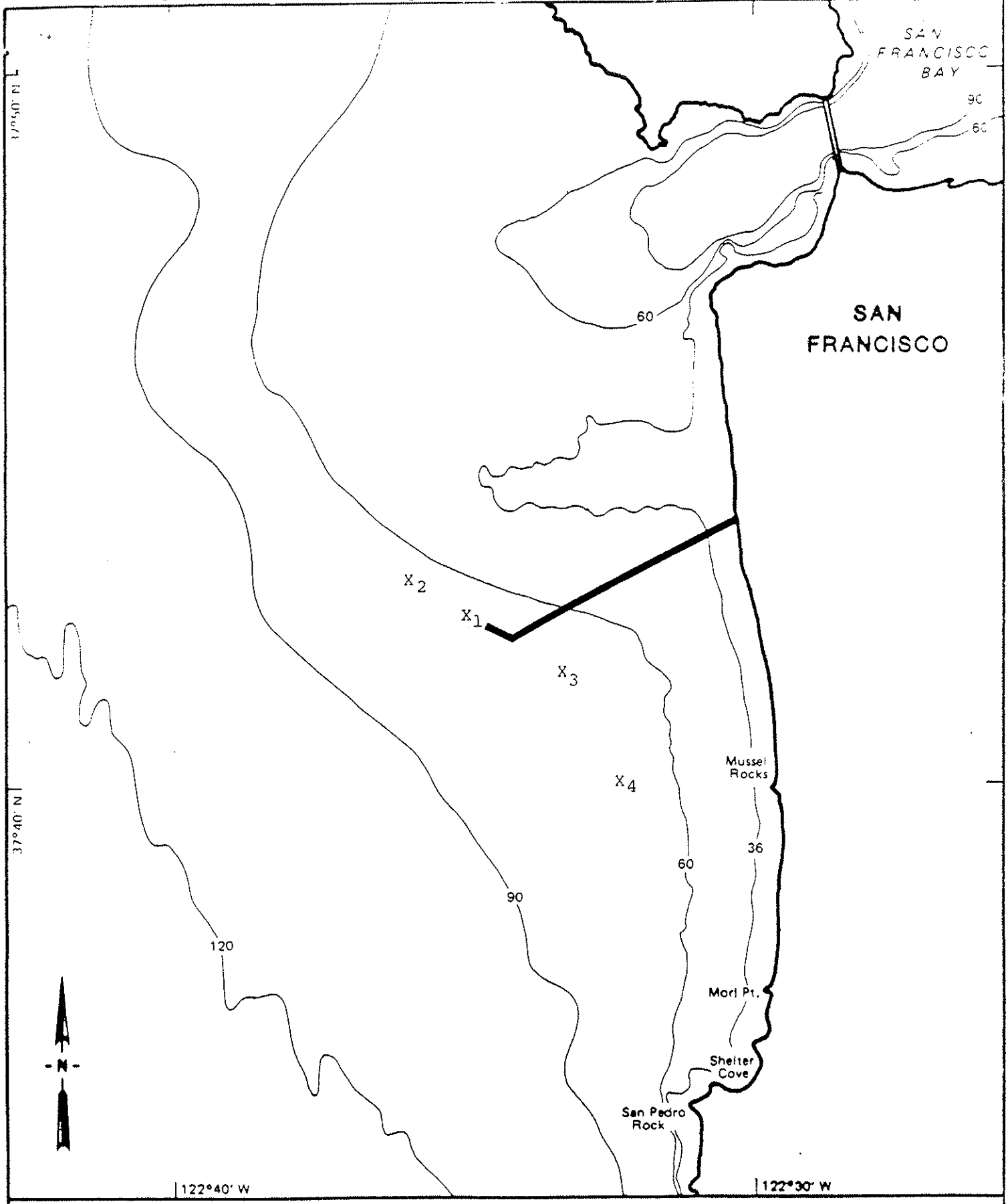
7. Three (3) replicates at each station for trace analysis of metals and phenols.

8. Sampling to commence upon discharge from Southwest Ocean Outfall.

9. Eight (8) replicates at each station.

10. Four (4) replicates at each station.

11. During wet weather only when combined effluent from the Richmond-Sunset WPCP and the Westside Transport boxes is discharged. Frequency of sampling and analysis not to exceed once per week.



OCEAN MONITORING STATIONS

0 1000 2000 3000 METERS

0 5000 10000 FEET

DEPTHS IN FEET